Amendments to the Claims

1. (CURRENTLY AMENDED) A processing system ~~(300)~~ comprising: a plurality of pipelines ~~(320)~~, each pipeline of the plurality of pipelines ~~(320)~~ including a plurality of core pipeline elements ~~(F1-F6)~~ that are configured to sequentially process data as it traverses the pipeline; and a plurality of auxiliary elements ~~(335)~~, each auxiliary element of the plurality of auxiliary elements ~~(335)~~ being configured to be selectively coupled between a pair of core pipeline elements of the plurality of core pipeline elements ~~(F1-F6)~~ to process the data as it traverses between the pair of core elements.

2.(CURRENTLY AMENDED) The processing system ~~(300)~~ of claim 1, wherein the data includes at least one of: video data and graphics data.

3.(CURRENTLY AMENDED) The processing system ~~(300)~~ of claim 2, wherein the data that is provided to two or more of the pipelines corresponds to a common image.

4.(CURRENTLY AMENDED) The processing system ~~(300)~~ of claim 2, wherein the data that is provided to two or more of the pipelines corresponds to different images.

5.(CURRENTLY AMENDED) The processing system ~~(300)~~ of claim 2, wherein the plurality of core pipeline elements ~~(F1-F6)~~ include at least one of: a pixel acquisition element, a pixel formatter, a chroma-keying element, an un-ditherer, a chroma-upsampler, a linear interpolator, a contrast balancer and a color-space converter.

6.(CURRENTLY AMENDED) The processing system ~~(300)~~ of claim 5, wherein the plurality of auxiliary elements ~~(335)~~ include at least one of: a color-lookup table, a color-transient-improver, a sample-rate up-converter, a histogram-modifier, a luminance-sharpener, and a color-feature module.

7. (CURRENTLY AMENDED) The processing system ~~(300)~~ of claim 2, wherein the plurality of auxiliary elements ~~(335)~~ include at least one of: a color-lookup table, a color-transient-improver, a sample-rate up-converter, a histogram-modifier, a luminance-sharpener, and a color-feature module.

8. (CURRENTLY AMENDED) The processing system ~~(300)~~ of claim 1, wherein each auxiliary element is configured to be selectively coupled between a predetermined pair of core pipeline elements of the plurality of core pipeline elements ~~(F1-F6)~~.

9. (CURRENTLY AMENDED) The processing system ~~(300)~~ of claim 1, wherein each auxiliary element includes: a function module ~~(420)~~, and a switch ~~(410)~~, wherein the switch ~~(410)~~ is configured to select among the plurality of pipelines ~~(320)~~ for the selective coupling of the auxiliary element to a select pipeline.

10. (CURRENTLY AMENDED) The processing system ~~(300)~~ of claim 1, further including a register ~~(430)~~ that is configured to control the selective coupling of the auxiliary elements ~~(335)~~ into the plurality of pipelines ~~(320)~~.

11. (CURRENTLY AMENDED) The processing system ~~(300)~~ of claim 1, further including: a data fetch module ~~(110)~~, operably coupled to each of the pipelines, that is configured to facilitate acquisition of the data, and a mixer ~~(150)~~, operably coupled to each of the pipelines, that is configured to merge the data from two or more pipelines of the plurality of pipelines ~~(320)~~.

12. (CURRENTLY AMENDED) The processing system ~~(300)~~ of claim 1, wherein the plurality of auxiliary elements ~~(335)~~ includes a number of duplicate copies of a functional element ~~(A-E)~~, and the number of duplicate copies of the functional element ~~(A-E)~~ is less than a number of pipelines in the plurality of pipelines ~~(320)~~.

13. (CURRENTLY AMENDED) The processing system ~~(300)~~ of claim 1, further including a controller ~~(350)~~ that facilitates the selective coupling of the auxiliary elements ~~(335)~~ into the plurality of pipelines ~~(320)~~.

14. (CURRENTLY AMENDED) The processing system ~~(300)~~ of claim 13, wherein the controller ~~(350)~~ is configured to effect the selective coupling upon commencement of an application that is executed via the processing system ~~(300)~~.

15. (CURRENTLY AMENDED) An integrated circuit comprising a plurality of homogeneous pipelines ~~(320)~~, and a controller ~~(350)~~ that is configured to enable a modification of one or more pipelines of the plurality of homogeneous pipelines ~~(320)~~ to produce a plurality of heterogeneous pipelines ~~(320a-320e)~~.

16. (CURRENTLY AMENDED) The integrated circuit of claim 15, further including one or more auxiliary elements ~~(335)~~ that are configured to be selectively inserted within the one or more pipelines ~~(320)~~ by the controller ~~(350)~~ to produce the plurality of heterogeneous pipelines ~~(320a-320e)~~.